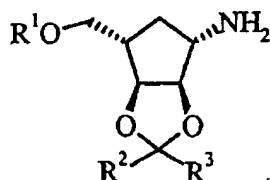


## AMENDMENTS TO THE CLAIMS

This Listing Of Claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims:

Claim 1 (Currently Amended): A method for preparing a compound of formula:

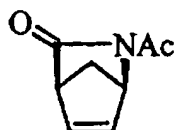


I,

and/or mirror image thereof,

wherein R<sup>1</sup> is hydrogen, C<sub>1-6</sub>-alkyl, C<sub>3-8</sub>-cycloalkyl or benzyl, and in which (i) R<sup>2</sup> is methyl and R<sup>3</sup> is ethyl, or (ii) R<sup>2</sup> is hydrogen and R<sup>3</sup> is C<sub>1-6</sub>-alkyl or phenyl, or (iii) R<sup>2</sup> is methyl and R<sup>3</sup> is methyl, or (iii) (iv) R<sup>2</sup> and R<sup>3</sup> together are a group of the formula -(CH<sub>2</sub>)<sub>n</sub>- with n = 4 to 6, and which is in the form of a free amine or a salt of a dibasic or tribasic organic acid, comprising:

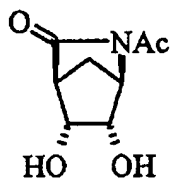
(A) converting a 2-acetyl-2-azabicyclo[2.2.1]hept-5-en-3-one of formula:



II

and/or mirror image thereof,

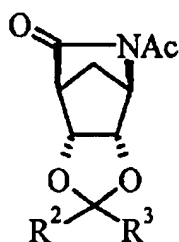
by *cis* hydroxylation of the double bond into a 2-acetyl-5,6-dihydroxy-2-aza-bicyclo[2.2.1]heptan-3-one of formula:



III

and/or mirror image thereof,

(B) converting the compound of the formula III by reaction with a ketone or an aldehyde of the formula  $R^2\text{-CO-R}^3$ , wherein  $R^2$  and  $R^3$  have the above stated meanings, or by reaction with 2,2-dimethoxypropane or 2,2-dimethoxybutane into a ketal or an acetal of formula:

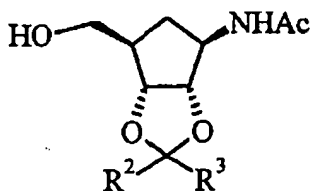


IV,

and/or mirror image thereof,

wherein  $R^2$  and  $R^3$  have the above stated meanings,

(C) converting the ketal or acetal of the formula IV by reductive ring opening into a compound of formula:

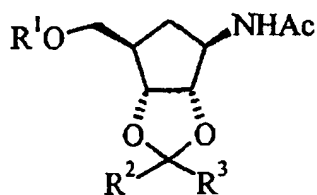


V,

and/or mirror image thereof,

wherein  $R^2$  and  $R^3$  have the above stated meanings,

(D) optionally converting the compound of formula V or an alcoholate thereof by reaction with dimethyl sulfate, benzyl chloride or a halide of the formula  $R^1-X$  wherein  $R^1$  has the above stated meaning other than hydrogen, and X is bromine or iodine, into an ether of formula:

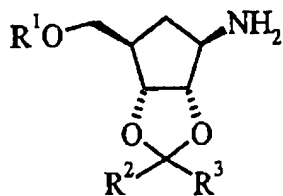


VI,

and/or mirror image thereof,

wherein  $R^1$  has the above stated meaning other than hydrogen and  $R^2$  and  $R^3$  have the above stated meanings,

(E) converting a compound of the formula V or VI by alkaline hydrolysis into a compound of formula:



I,

and/or mirror image thereof,

wherein  $R^1$ ,  $R^2$  and  $R^3$  have the above stated meanings, and

(F) optionally converting the compound of the formula I by addition of a dibasic or tribasic organic acid into corresponding salt wherein  $R^1$ ,  $R^2$  and  $R^3$  have the above stated meanings.

Claim 2 (Previously Presented): The method as claimed in claim 1, wherein the *cis* hydroxylation of the double bond is carried out using osmium tetroxide.

Claim 3 (Previously Presented): The method as claimed in claim 2, wherein the osmium tetroxide is used in an amount of from 0.1 to 2.0 mol percent based on the compound of the formula II, and the compound of the formula II is regenerated during the reaction.

Claim 4 (Previously Presented): The method as claimed in claim 3, wherein the osmium tetroxide is regenerated by adding a sterically demanding *N*-oxide or a mixture of a sterically demanding amine with hydrogen peroxide.

Claim 5 (Previously Presented): The method as claimed in claim 4, wherein the formation of the ketal or acetal of formula IV is carried out with acid catalysis.

Claim 6 (Previously Presented): The method as claimed in claim 5, wherein sulfuric acid and/or *p*-toluenesulfonic acid is used for the acid catalysis.

Claim 7 (Previously Presented): The method as claimed in claim 6, wherein acetone or 2,2-dimethoxypropane is employed for forming the ketal or acetal.

Claim 8 (Previously Presented): The method as claimed in claim 7, wherein the reductive ring opening is carried out with a complex metal hydride.

Claim 9 (Previously Presented): The method as claimed in claim 8, wherein an alcohol of the formula V is converted with dimethyl sulfate into the methyl ether.

Claim 10 (Previously Presented): The method as claimed in claim 8, wherein an alcohol of the formula V is converted with methyl iodide into the methyl ether.

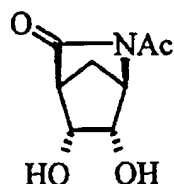
Claim 11 (Previously Presented): The method as claimed in claim 10, wherein the alkaline hydrolysis is carried out with at least one alkali metal or alkaline earth metal hydroxide selected from the group consisting of LiOH, NaOH, KOH,  $\text{Ca}(\text{OH})_2$ , and  $\text{Ba}(\text{OH})_2$ , in aqueous and/or alcoholic solution or suspension.

Claim 12 (Previously Presented): The method as claimed in claim 11, wherein the alkaline hydrolysis is carried out under a pressure of from 1 to 10 bar, and at a temperature of from 50 to 150°C.

Claim 13 (Previously Presented): The method as claimed in claim 12, wherein the organic acid is selected from the group consisting of oxalic acid free of water of crystallization and/or containing water of crystallization, (+)-, (-)- or meso-tartaric acid, (+)- or (-)-malic acid, tartronic acid, mesoxalic acid and oxaloacetic acid.

Claim 14 (Previously Presented): The method as claimed in claim 13, wherein oxalic acid free of water of crystallization and/or containing water of crystallization is employed as organic acid for the salt formation.

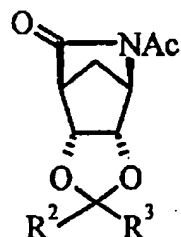
Claim 15 (Previously Presented): A compound of formula:



I.

or mirror image thereof.

Claim 16 (Currently Amended): A compound of formula:



IV,

or mirror image thereof,

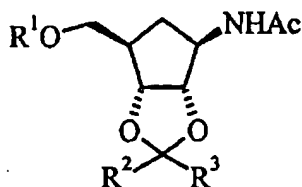
wherein R<sup>1</sup> is hydrogen, C<sub>1-6</sub>-alkyl, C<sub>3-8</sub>-cycloalkyl or benzyl, and (i)

R<sup>2</sup> is methyl and R<sup>3</sup> is ethyl, or (ii) R<sup>2</sup> is hydrogen and R<sup>3</sup> is C<sub>1-6</sub>-alkyl or phenyl, or

(iii) R<sup>2</sup> is methyl and R<sup>3</sup> is methyl, or (iii) (iv) R<sup>2</sup> and R<sup>3</sup> together are a group of the

formula -(CH<sub>2</sub>)<sub>n</sub>- with n = 4 to 6.

Claim 17 (Currently Amended): A compound of formula:



VI,

or mirror image thereof,

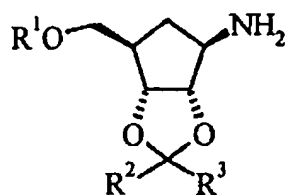
wherein R<sup>1</sup> is C<sub>1-6</sub>-alkyl, C<sub>3-8</sub>-cycloalkyl or benzyl, and (i) R<sup>2</sup> is methyl and R<sup>3</sup> is

ethyl, or (ii) R<sup>2</sup> is hydrogen and R<sup>3</sup> is C<sub>1-6</sub>-alkyl or phenyl, or (iii) R<sup>2</sup> is methyl and

R<sup>3</sup> is methyl, or (iii) (iv) R<sup>2</sup> and R<sup>3</sup> together are a group of the formula -(CH<sub>2</sub>)<sub>n</sub>- with

n = 4 to 6.

Claim 18 (Currently Amended): A salt of a dibasic or tribasic organic acid of compounds of formula:



I,

or mirror image thereof,

wherein  $R^1$  is hydrogen,  $C_{1-6}$ -alkyl,  $C_{3-8}$ -cycloalkyl or benzyl, and (i)  $R^2$  is methyl and  $R^3$  is ethyl, or (ii)  $R^2$  is hydrogen and  $R^3$  is  $C_{1-6}$ -alkyl or phenyl, or (iii)  $R^2$  is methyl and  $R^3$  is methyl, or (iii) (iv)  $R^2$  and  $R^3$  together are a group of the formula  $-(CH_2)_n-$  with  $n = 4$  to  $6$ .

Claim 19 (Previously Presented): The method as claimed in claim 2, wherein the osmium tetroxide is used in an amount of from 0.1 to 2.0 mol percent, based on the compound of the formula II, and the compound of the formula II is regenerated during the reaction.

Claim 20 (Previously Presented): The method as claimed in claim 1, wherein the formation of the ketal or acetal of formula IV is carried out with acid catalysis.

Claim 21 (Previously Presented): The method as claimed in claim 20, wherein sulfuric acid and/or p-toluenesulfonic acid is used for the acid catalysis.

Claim 22 (Previously Presented): The method as claimed in claim 6, wherein acetone or 2,2-dimethoxypropane is employed for forming the ketal or acetal.

Claim 23 (Previously Presented): The method as claimed in Claim 8, wherein the complex metal hydride is  $NaBH_4$ .

Claim 24 (Previously Presented): The method as claimed in claim 1, wherein the reductive ring opening is carried out with a complex metal hydride.

Claim 25 (Previously Presented): The method as claimed in claim 24, wherein the complex metal hydride is  $\text{NaBH}_4$ .

Claim 26 (Previously Presented): The method as claimed in claim 1, wherein an alcohol of the formula V is converted with dimethyl sulfate into the methyl ether.

Claim 27 (Previously Presented): The method as claimed in claim 1, wherein an alcohol of the formula V is converted with methyl iodide into the methyl ether.

Claim 28 (Previously Presented): The method as claimed in claim 1, wherein the alkaline hydrolysis is carried out with at least one alkali metal or alkaline earth metal hydroxide selected from the group consisting of  $\text{LiOH}$ ,  $\text{NaOH}$ ,  $\text{KOH}$ ,  $\text{Ca(OH)}_2$ , and  $\text{Ba(OH)}_2$ , in aqueous and/or alcoholic solution or suspension.

Claim 29 (Previously Presented): The method as claimed in claim 12, wherein the alkaline hydrolysis is carried out under a pressure of from 1 to 2 bar, and at a temperature of from 80 to 100°C.

Claim 30 (Previously Presented): The method as claimed in claim 1, wherein the alkaline hydrolysis is carried out under a pressure of from 1 to 10 bar, and at a temperature of from 50 to 150°C.

Claim 31 (Previously Presented): The method as claimed in claim 30, wherein the alkaline hydrolysis is carried out under a pressure of from 1 to 2 bar, and at a temperature of from 80 to 100°C.



Claim 32 (Previously Presented): The method as claimed in claim 1, wherein the organic acid is selected from the group consisting of oxalic acid free of water of crystallization and/or containing water of crystallization, (+)-, or (-)- or *meso*-tartaric acid, (+)- or (-)-malic acid, tartronic acid, mesoxalic acid and oxaloacetic acid.

Claim 33 (Previously Presented): The method as claimed in claim 32, wherein oxalic acid free of water of crystallization and/or containing water of crystallization is employed as organic acid for the salt formation.